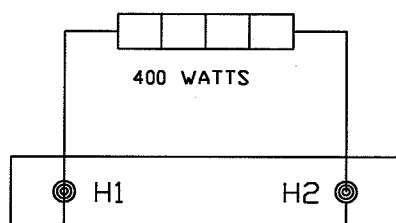
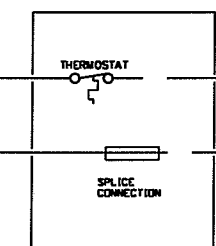


FOR LOCATION, REFERENCE DRAWING
8-6176205-G1 SHT 2 OF 4

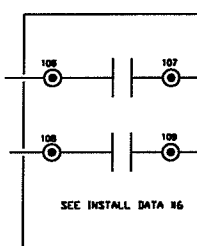


GENERATOR SPACE HEATER



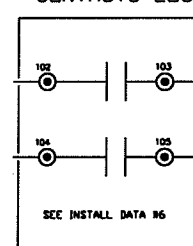
THERMOSTAT TO BE
MOUNTED OFF OF
THE ENGINE
TO BE PROVIDED
WITH 8' CAPILLARY
AND CABLE

CONTACTS LOCATED IN LOP



POWER IN
120 VAC
SHIPYARD
WIRING

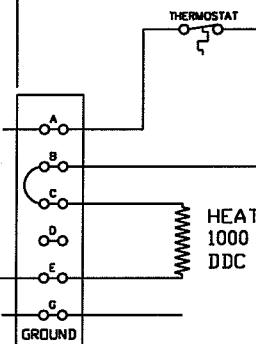
CONTACTS LOCATED IN LOP



SHIPYARD
WIRING

JACKET WATER COOLANT HEATER

FOR LOCATION REFER TO DWG 8-6176205-G1 SHT 3 OF 4



HEATER ELEMENT
1000 WATTS, 120 VOLT
DDC GROUP # 06Y02C0490

SHIPYARD INSTALLATION DATA

MISCELLANEOUS ELECTRICAL

1. STATOR AND BEARING RTD TO BE WIRED TO SHIP ALARM PANEL USING THREE WIRE RTD CONDUCTORS.
2. CONTACTS FOR CONTROL OF JACKET WATER HEATER, GENERATOR HEATER AND PRELUBE PUMP ARE LOCATED IN THE ENGINE LOP.
3. SHIPYARD TO SUPPLY ALL INTERCONNECT WIRING FROM LOP TO 120V AC COMPONENTS AS NOTED.
4. CONDUCTORS TO BE SIZED PER POWER REQUIREMENTS AS NOTED.
5. THERMOSTAT FOR GENERATOR HEATER TO BE MOUNTED OFF OF THE GEN SET ASSEMBLY. WIRING AND CAPILLARY FROM THERMOSTAT TO GENERATOR HOUSING HAS BEEN INCLUDED BY PPPC.
6. REFERENCE LOP DRAWING 8-6176205-E1
7. REFERENCE SHEET 2 FOR ADDITIONAL DETAILS ON PRELUBE MOTOR STARTER.

TERMINATION POINTS

- ⊙ LOCATED IN LOP
- ⊠ LOCATED ON TERMINAL STRIP IN MOTOR STARTER
- ⊞ LOCATED ON MOTOR STARTER CONTACTOR

ENGINE POWER REQUIREMENTS

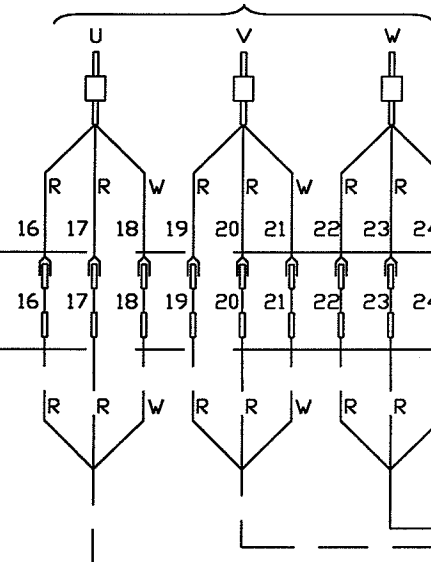
- A. Current draw - ignition off: 25 mA
- B. Current draw - Ignition on and engine stopped: 400 mA
- C. Current draw at idle: 0.8 A
- D. Current draw - rated RPM, full load: 3.0 A
- E. Current draw - LOP: 2 A
- F. EGCP-3 Input current: 0.9 A @ 24 Volts
Maximum input power: 22 watts
Typical input power: 20 watts
- G. Prelube Pump: 1/2 hp, 120 VAC, CODE M, SF 1.15, 1 PHASE
FLA: 8

Notes:

1. Dashed line indicates shipyard wiring
2. Solid line indicates PPPC wiring
3. ABBREVIATIONS: PPPC PACIFIC POWER PRODUCTS COMPANY

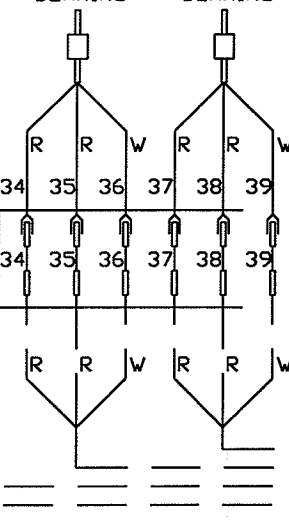
STATOR R.T.D.s

PHASE



BEARING R.T.D.s

DRIVE END BEARING N.D.E. BEARING



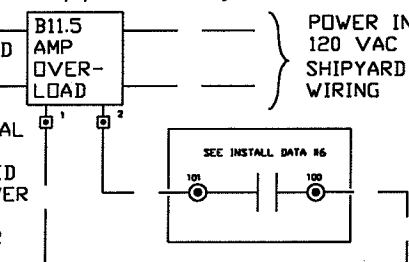
PRELUBE PUMP
MOTOR
(PPPC SUPPLIED
AND MOUNTED
ON BASE)

PRELUBE PUMP
MOTOR STARTER
(PPPC SUPPLIED)

AUX CONTACTS LOP
SHIPYARD WIRING
REF INSTALL NOTE 6 AND 7

SEE POWER
REQUIREMENTS
NOTE #G

TERMINAL
STRIP
LOCATED
IN LOWER
RIGHT
CORNER
OF
STARTER



POWER IN
120 VAC
SHIPYARD
WIRING

TERMINALS LOCATED IN BOX ON FORWARD
SIDE OF GENERATOR LEAD CONNECTION BOX
REFERENCE DRAWING 8-6176205-G1 SHT 2 OF 4

SHIPYARD WIRING USING 3 WIRE
RTD CONDUCTORS TO SHIP ALARM
SYSTEM
REF DRAWING 1-77270-000 SHT 7&8
AND DRAWING 6-SY315-A-AA00.A1

NOTES:

(1) R = RED W = WHITE

STATOR - 1 PER PHASE (3 LEAD TYPE)

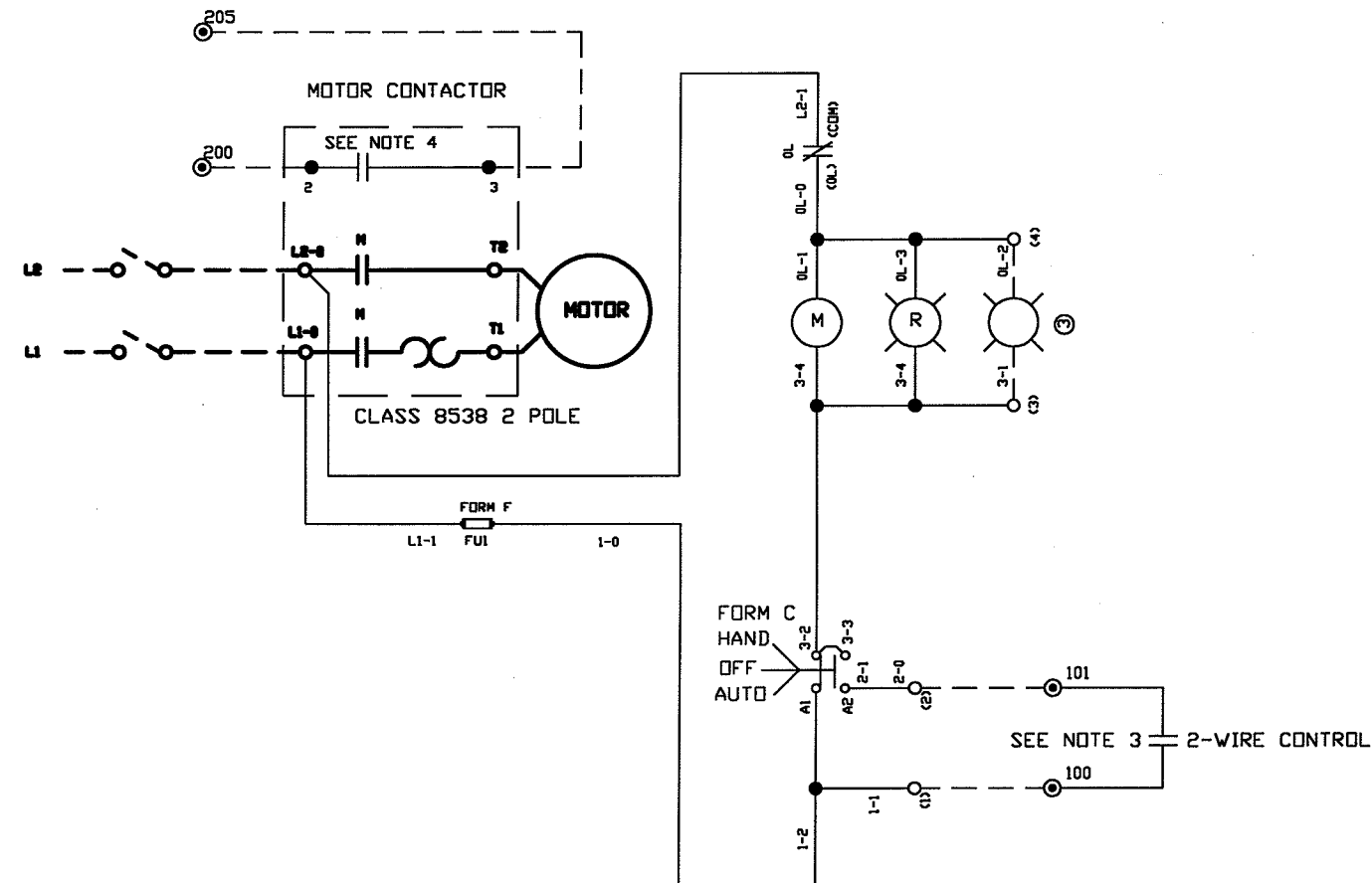
OR

STATOR - 1 PER PHASE (3 LEAD TYPE) - ACTIVE
WITH 1 PER PHASE (3 LEAD TYPE) - IN RESERVE
(i.e. TERMINAL ENDS OF RESERVE SET TO BE
TIED BACK INTO HARNESS UNTIL REQUIRED

REF NEWAGE DWG DA7-T56

				DRAWING: MISC. ELECTRICAL SYSTEM DIAGRAM JW/GEN HEATER, RTD, PRELUBE, RADIATOR, DC POWER PROJECT: WASHINGTON STATE FERRIES 144 CAR FERRY	
		7215 SOUTH 228TH STREET, KENT, WA 98037 PH. (253) 854-0505 • FAX (253) 850-2631		ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED	
		PROPRIETARY NOTICE: THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF PDDA AND IS CONSIDERED CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, OR USED IN PART OR WHOLE WITHOUT THE WRITTEN CONSENT OF PDDA.		DESIGNED RAB 10-13-05 CHECKED KJC 10-13-05 DRAFTED DMD 10-13-05	DRAWING NO. 8-6176205-E5 REV. B

SQUARE D COMPANY
NEMA SIZE 1, TYPE S STARTER
WITH INTEGRAL LOW-VOLTAGE CONTROL



NOTES

1. DIAGRAM SHOWS AVAILABLE OPTIONS WITH THEIR FORM NUMBERS. SEE NAMEPLATE FOR SPECIFIC FORM(S) PROVIDED OR FIELD MODIFY AS SHOWN.
2. WIRE SEQUENCE NUMBERS DESIGNATE THE PRIORITY IN WHICH WIRES ARE TO BE CONNECTED, STARTING WITH THE LOWEST VALUE. WIRE SERIES NUMBER WITHIN THE SAME SERIES MAY BE INTERCONNECTED OR CONNECT TO THE SAME POINT.
3. CONNECTION TO LOP (REFERENCE 8-6176205-E1)
4. CONNECTION FOR AUXILIARY CONTACTS LOCATED ON THE LEFT SIDE OF CONTACT BLOCK
5. REFERENCE SQUARE D DRAWING # W21346052-001-01

LEGEND:

- WIRE SEQUENCE NUMBER
WIRE SERIES NUMBER
- () INDICATES ACTUAL MARKINGS ON DEVICE
- ⊙ TERMINAL LOCATED IN LOP

SELECTION SWITCH TABLES

	HAND	OFF	AUTO
A1	X		
A2			X

X = CONTACT CLOSED

- MOTOR CONNECTION BY SHIPYARD
- CONTROL WIRING BY SHIPYARD
- CONTROL WIRING BY PPPC

		DRAWING: MISC. ELECTRICAL SYSTEM DIAGRAM -EMER PRELUBE PUMP MOTOR STARTER PROJECT: WASHINGTON STATE FERRIES 144 CAR FERRY	
7215 SOUTH 228TH STREET, KENT, WA 98037 PH. (253) 854-0505 • FAX (253) 850-2631		ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED	
B 3/23/06 RAB A 2/23/06 RAB REV DATE CHECKED	PROPRIETARY NOTICE: THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE PROPERTY OF PDDA AND IS CONSIDERED CONFIDENTIAL AND MAY NOT BE REPRODUCED, COPIED, OR USED IN PART OR WHOLE WITHOUT THE WRITTEN CONSENT OF PDDA.	DESIGNED RAB 10-13-05 CHECKED KJC 10-13-05 DRAFTED DMD 10-13-05	SHEET 2 OF 2 SCALE: NONE DRAWING NO. 8-6176205-E5 REV. B